

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A microscope ~~Microscope~~ (2) with a stand (12) and a microscope stage (18) disposed on the stand (12) and capable of being moved in all three space directions (X, Y, and Z) by means of motors[,], ~~comprising: characterized in that in or on the stand (12) there is provided~~ at least one temperature sensor (30) in or on said stand (12); ~~that there is provided~~ a regulating and control unit (10), said regulating and control unit comprising including a data storage device (9) and a microprocessor (11);
 a correction table (44) ~~being~~ stored in said data storage device (9) and containing drift values for the three space directions (X, Y and Z) of ~~the said~~ stand (12) as a function of temperature; and,
first, second, and third motors (21, 22, 23) on said microscope stage (18);
wherein said and that temperature sensors (30) are connected to ~~the said~~ microprocessor and provide signals on the basis of which it is possible to call up appropriate values for correction; and,
 whereby ~~the said~~ regulating and control unit (10) adjusts a said first, second and third motor (21, 22, 23) ~~on the microscope stage (18)~~ so that ~~the said~~ microscope stage (18) assumes a stable position in space independently of the temperature.

2. (currently amended) The microscope ~~Microscope~~ according to claim 1, wherein said correction table (44) can be established manually.

3. (currently amended) The microscope ~~Microscope~~ according to claim 1, wherein said correction table (44) can be established automatically.

4. (currently amended) The microscope ~~Microscope~~ according to claim 1, wherein said regulating and control unit (10) is integrated into the stand (12) of the microscope (2).

5. (currently amended) The microscope ~~Microscope~~ according to claim 1, wherein said the regulating and control unit (10) in the stand (12) is disposed in an external electronics box (42).

6. (currently amended) The microscope ~~Microscope~~ according to claim 4 ~~or 5~~ characterized in that ~~there is provided~~ further comprising an input unit (38) which is connected with the regulating and control unit (10).

7. (currently amended) The microscope ~~Microscope~~ according to claim ~~1-6~~, characterized in that the input unit (38) is a mouse, a trackball, a key or a touchscreen.

8. (currently amended) A method ~~Method~~ for correcting XYZ drift caused by temperature changes in a microscope (2) with a stand (12), a microscope stage (18) disposed on the stand (12) and being capable of being moved in all three space directions (X, Y, Z) by ~~motors~~ a first, second, and third motors, and with at least one temperature sensor (30) disposed in or on the stand (12), ~~characterized by the following steps~~ comprising:

- recording and storing a correction table (44) in a data storage device (9) in a regulating and control unit (10) associated with ~~the said~~ microscope (2); and
- operating ~~the said~~ microscope (2) in the examination mode so that ~~the said~~ regulating and control unit (10), on the basis of the signals received from the temperature sensors (30) and of the contents of the correction table (44), operates ~~the said~~ first, second and third ~~motor~~ motors (21, 22, 23) of the microscope stage (18) in a manner such that the position of said stage (18) relative to ~~the~~ an optical axis (13) of an objective placed in ~~its~~ the work position of said objective is constant with time.

9. (currently amended) The method ~~Method~~ according to claim 8, ~~characterized in that the~~ wherein said correction table (44) is established manually.

10. (currently amended) The method ~~Method~~ according to claim 9, ~~characterized in that~~ further

comprising:

providing an ocular having a first cross hairs (34); is provided in an ocular (14)

placing a slide having and a second cross hairs (35) is provided on a slide (36) placed on the said microscope stage (18);

and a person (32) brings focusing the said second cross hairs (35) into focus by setting the said third motor (23); and,

setting said first and/or second motor (21, 22) to superimpose said first cross hair and said second cross hair; and,

actuating said input device (38) to transfer data required for displacement to superimpose said first cross hairs and said second cross hairs of said ocular and said second slide to said correction table (44). after which superposition between the first and the second cross hairs (34, 35) is attained by an appropriate setting of the first and/or the second motor (21, 22), and that) by actuating an input device (38) the data required for the displacement are transferred by the microprocessor to the correction table (44) provided in the data storage device (9).

11. (currently amended) The method Method according to claim 10, echaracterized in that thewherein said input device (38) is a mouse, a trackball, a key or a touchscreen.

12. (currently amended) The method Method according to claim 8, echaracterized in that thewherein said correction table (44) is established automatically.

13. (currently amended) The method Method according to claim 12, echaracterized in that only the second cross hairs (35) is provided on the slide (36) placed on the microscope stage (18), that after the microscope (2) is turned on further comprising
focusing an autofocus of a camera (25) is focused on the said second cross hairs (35) by an autofocus of the camera (25);;

~~that the displacing said second cross hairs (35) is displaced into the said optical axis (13) of the objective (16) in the work position by using~~ an image-processing software in cooperation with ~~the said first and second motor ;motors (21, 22);~~ and
~~that then transferring the data needed for the displacement are transferred to the correction table (44) available in the data storage device (9).~~
wherein only said second cross hairs (35) is provided on said slide.

14. (currently amended) The method ~~Method~~ according to claim 8, ~~characterized in that the~~wherein
said regulating and control unit (10) is integrated into the said stand (12) of the said microscope (2).

15. (currently amended) The method ~~Method~~ according to claim 8, ~~characterized in that the~~wherein
said regulating and control unit (10) in the said stand (12) is disposed in an external electronics box.

16. (currently amended) The method ~~Method~~ according to claim 8, ~~characterized in that the~~further
comprising:

establishing said correction table is established at the factory on the basis of a statistical evaluation of several stands; and,

~~made available~~incorporating said correction table in the regulating and control unit (10) of ~~the~~said
microscope.

17. (new) The microscope according to claim 5 further comprising an input unit (38) which is connected with the regulating and control unit (10).

18. (new) The microscope according to claim 17, characterized in that the input unit (38) is a mouse, a trackball, a key or a touchscreen.